

Notes

- ALL UNSUITABLE MATERIAL MUST BE REMOVED FROM THE PROPOSED CONSTRUCTION AREA BELOW THE SOIL ABSORPTION SYSTEM AND A MINIMUM OF FIVE FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE SYSTEM. BACKFILL MATERIAL SHALL CONSIST OF CLEAN SAND OR GRAVEL FREE OF FINES AND HAVING A PERCOLATION RATE OF 2 MIN. PER INCH OR LESS AFTER BEING PLACED AND COMPACTED.
- ALL STONE MUST BE DOUBLE WASHED AND FREE FROM FINES AND MUST HAVE LESS THAN 0.5% FINER MATERIAL PASSING THE NO. 200 SIEVE.
- HEAVY MACHINERY SHALL NOT BE PERMITTED TO PASS OVER ANY PART OF THE PROPOSED SUBSURFACE DISPOSAL SYSTEM.
- SYSTEM PIPING SHALL CONSIST OF POLYVINYL CHLORIDE PIPE(PVC) SCHEDULE 40 NSF, UNLESS OTHERWISE NOTED.
- GARBAGE GRINDER/DISPOSAL SYSTEM IS NOT TO BE CONNECTED TO THE SUBSURFACE DISPOSAL SYSTEM.
- SITE SURVEY WAS SOLELY PERFORMED TO OBTAIN SITE TOPOGRAPHY FOR THE INSTALLATION OF A SUBSURFACE DISPOSAL SYSTEM. THE DESIGNER IS NOT RESPONSIBLE FOR THE ACCURACY OF THE REPRESENTATION OF ANY PROPERTY LINES OR BUILDING LOCATIONS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROLS.
- ALL DISTURBED AREAS SHALL BE LOAMED, SEEDED AND MAINTAINED TO PREVENT EROSION. ANY DISTURBED PAVING MUST BE REPLACED IN-KIND.
- THE DESIGNER HAS NOT BEEN RETAINED BY THE CLIENT TO CONSTRUCT OR SUPERVISE THE CONSTRUCTION OF THE SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS FOR INSPECTION OF THE INSTALLATION OF THE SYSTEM WITH THE LOCAL BOARD OF HEALTH.
- ALL SURFACE AND SUBSURFACE DRAINAGE SHALL BE DIRECTED AWAY FROM THE SUBSURFACE DISPOSAL SYSTEM AND FOUNDATIONS.
- ALL SYSTEM TANKS AND PIPING CONNECTIONS SHALL BE MADE WATERTIGHT THROUGH MANUFACTURERS SPECIFICATIONS AND WARRANTY.
- PROPER MAINTENANCE AND PERFORMANCE OF THE SUBSURFACE DISPOSAL SYSTEM SHOULD CONSIST OF INSPECTING THE SEPTIC TANK AT LEAST ONCE A YEAR AND WHEN THE TOTAL DEPTH OF SOUM AND SOLIDS EXCEEDS 1/3 THE LIQUID DEPTH OF THE TANK, THE TANK SHOULD BE PUMPED.
- SEPTIC TANK MANUFACTURER TO SUPPLY BOUANCY VERIFICATION AND/OR BOUANCY PAD FOR PROPOSED CHAMBERS.
- SEWER LINES WHICH HAVE LESS THAN 1/4 BENDS INSTALLED SHALL ALSO HAVE CLEANOUTS INSTALLED IN AN ACCESSIBLE LOCATION.

LOCAL UPGRADE REQUEST:

UNDER SECTION 15.405(1) OF MDEP REGULATION 310 CMR 15.00

- A REQUEST IS ASKED FOR A VARIANCE FOR A REDUCTION OF THE SAS FROM THE E.S.H.W. FROM 4 FT. TO 3 FT.
- A REQUEST IS ASKED FOR A VARIANCE FOR A REDUCTION OF THE SAS FROM THE FOUNDATION WALL FROM 20 FT. TO 12 FT.
- A REQUEST IS ASKED FOR A VARIANCE FOR A REDUCTION OF THE SEPTIC TANK FROM THE FOUNDATION WALL FROM 10 FT. TO 5 FT.

Standard Design

Design Flow : 3 Bedrooms @ 110 gpd = 330 gpd
LTAR = 0.53 gpd/sq.ft.

Design of Soil Absorption System : Field

Effective Width = 20 Feet
Effective Depth = 6 inches
Bottom Capacity = 20 sq.ft./ft. x 0.53 gpd/sq.ft. = 10.6 gpd/ft.
Overall Capacity = 12.0 gpd/ft.
330 gpd / 10.6 gpd/ft. = 31.13 ft. of Field Needed(623 s.f.)

INFILTRATOR DESIGN

Effective Leaching Area = 4.72sf/ft(Bed) for each unit

Equiv. Effect. Leaching Area(UNITS): 4.72 s.f./l.f. x (4.0 l.f. x 36 units) = 680 s.f. of field
End Caps: 4.72 s.f./l.f. x (1.1 l.f. x 12 units) = 62 s.f. of field
Total 712 s.f. of field

USE FIELD SIZE 6 UNITS WIDE 6 UNITS LONG, 36 TOTAL UNITS, 12 END CAPS

Septic Tank Design

200% for Design factor : 2 X330 gpd = 660 gpd
Use (Min. Req'd.) 1500 Gal. Septic Tank

SOIL EVALUATOR STATEMENT :

(JAMES M. KAVANAUGH) CERTIFY THAT ON JULY 26,1995 I HAVE PASSED THE EXAMINATION APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME CONSISTENT WITH THE REQUIRED TRAINING, EXPERTISE AND EXPERIENCE DESCRIBED IN 310 CMR 15.018(2).

James M. Kavanaugh, P.E.

Environmental Consultant

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N. Reading Mass. 01864**

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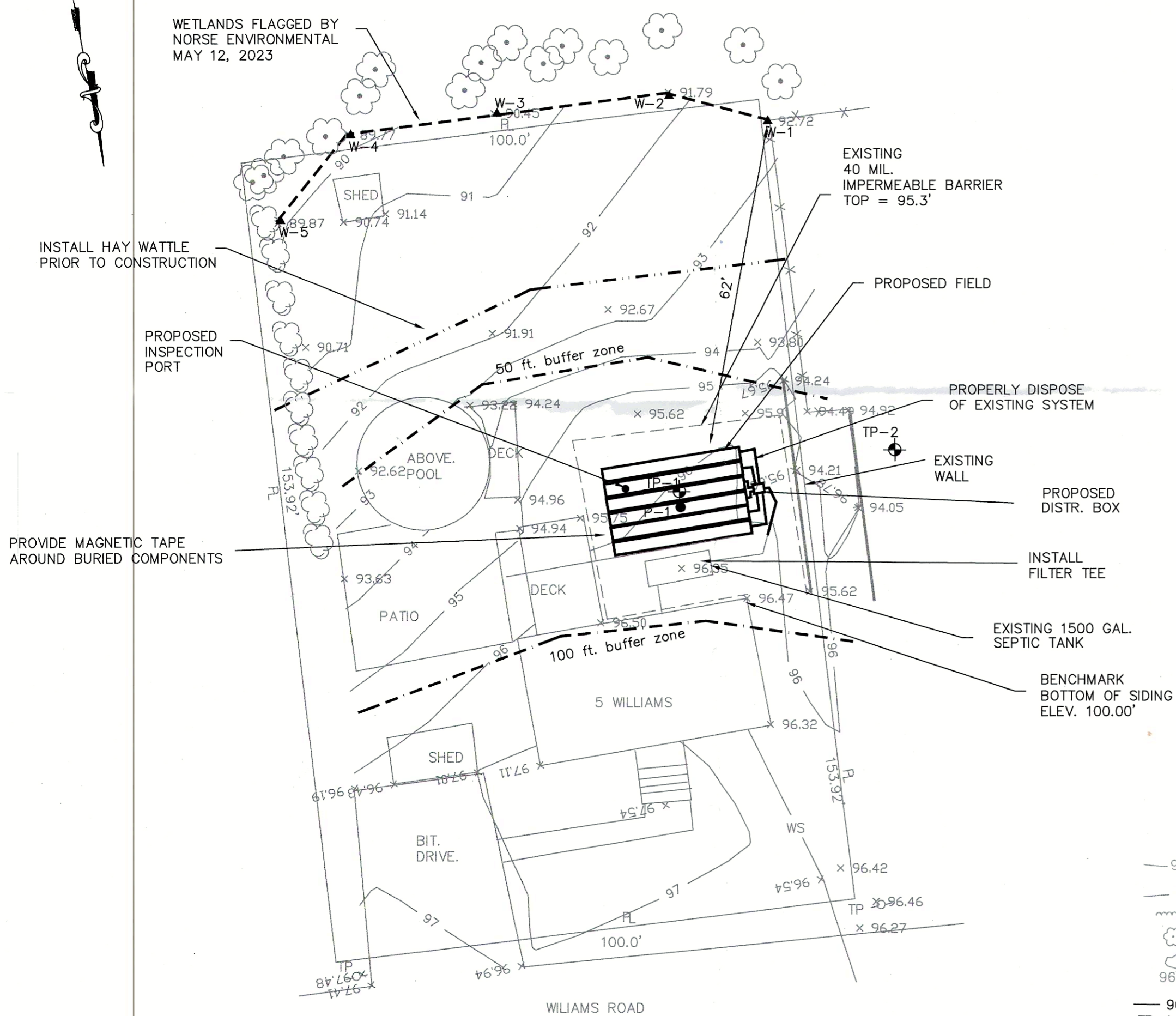
**DESIGN OF SUBSURFACE DISPOSAL SYSTEM
PREPARED FOR**

**Ronald Hajj
5 Williams Road
North Reading Ma. 01864**

**Map No. 61
Parcel No. 51**



Proj. No. 23009	Desn. By: JMK
Date : May 22, 2023	Drn. By: DMC
Scale : As Noted	Sheet 1 of 1



LEGEND

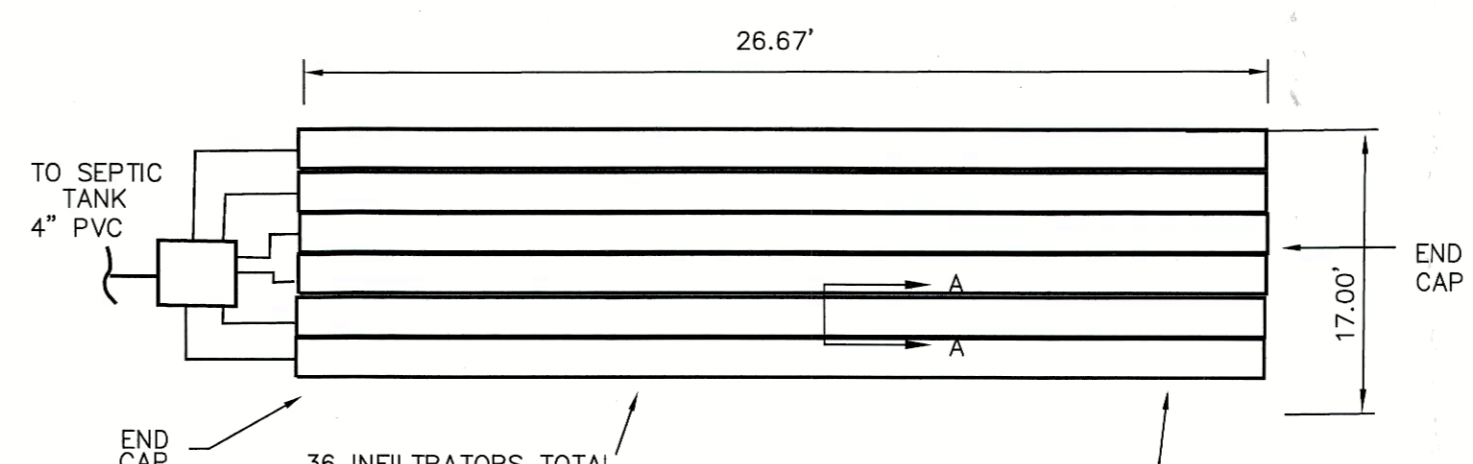
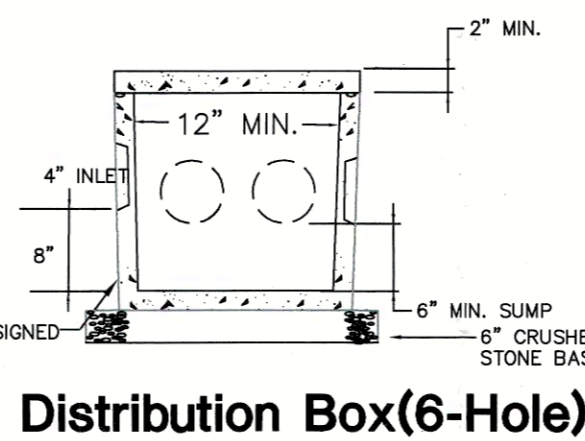
- EXISTING CONTOUR
- PROPERTY LINE
- TREE LINE/WOODED AREA
- TREE
- ROCK/BOULDER
- SPOT GRADE
- PROPOSED CONTOUR
- TEST PIT LOC.
- PERC. TEST LOC.
- B.V.W. DELINEATION LINE
- PROPOSED HAY WATTLES
- 100' BUFFER ZONE LINE
- RETAINING WALL
- SHRUBS/PLANTS
- STONE WALL
- FENCE

NOTES:

- GRADE SURFACE DRAINAGE AWAY FROM HOUSE AND SEPTIC SYSTEM
- CONTRACTOR SHALL VERIFY AND INCORPORATE ALL INTERIOR PLUMBING WORK NECESSARY TO CONNECT TO PROPOSED SYSTEM
- NO PLANTINGS WITHIN 5 FT. OF SYSTEM

NOTE:

THIS PLAN WAS PREPARED FOR THE SOLE PURPOSE OF THE ABOVE WORK AND FOR THE NOTED PERSON/FIRM. THE INFORMATION CONTAINED WITHIN THIS PLAN MAY NOT BE USED FOR OTHER PURPOSES WITHOUT THE WRITTEN CONSENT OF THE DESIGN ENGINEER.



SOIL ABSORPTION SYSTEM PLAN

INFILTRATOR QUICK4 STANDARD
(48"x34"x12")
(NOT TO SCALE)

